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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,441	07/22/2003	David Miles	9052-160	6411
20792	7590	01/07/2005	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC PO BOX 37428 RALEIGH, NC 27627			NGUYEN, JIMMY T	
			ART UNIT	PAPER NUMBER
			3725	

DATE MAILED: 01/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/624,441	<b>Applicant(s)</b> MILES, DAVID	
	<b>Examiner</b> Jimmy T Nguyen	<b>Art Unit</b> 3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-70 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/27/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in United Kingdom on March 19, 2003. It is noted, however, that applicant has not filed a certified copy of the UK 0306283.3 application as required by 35 U.S.C. 119(b).

### ***Drawings***

Figure 1 and 3a should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the structural arrangement of the mixer regions as claimed in claims 15-17, 32-34, 49-51, and 66-68; a temperature control element (claims 18, 35, 52 and 69); and a choke (claims 19, 36, 53, and 70) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

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drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11, 12, 28, 29, 45, 46, 62, and 63 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 11, 28, 45, and 62, it is unclear whether "the discharge end" as claimed is the discharge end of the tunnel or the discharge end of the frusto conical member. Clarification is required.

Regarding claims 12, 29, 46, and 63, it is unclear whether "the feed inlet end" as claimed is the feed end of the tunnel or the feed inlet end of the frusto conical member. Clarification is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-8, 13-14, 20-25, 30-31, 37-42, 47-48, 54-59, and 64-65 are rejected under 35 U.S.C. 102(b) as being anticipated by Mackay et al. (hereinafter “Mackay”) (US 4,915,830).**

Regarding claims 1, 20, 37 and 54, Mackay discloses an apparatus and a method for extracting liquids from a process material, comprising: a worm assembly (1) that is adapted to extract liquids from the process material by compressing, decompressing, mixing; and recompressing (col. 2, line 48 to col. 3, line 20).

Regarding claims 2 and 3, Mackay discloses the screw assembly as claimed, thus the performance of the decompressing and the mixing steps are inherently the same.

Regarding claims 4, 21, 38 and 55, the screw assembly comprises an assembly of flights (104) in a tunnel (fig. 2) provided with a feed end (5) and a discharge end (6).

Regarding claims 5-7, 22-24, 39-41 and 56-58, the worm assembly comprises a mixer region (2c), wherein the mixer region comprises a toothed element (112) adapted to disrupt a flow of the material.

Regarding claims 8, 25, 42, and 59, the mixer region further comprises compressor region (see a right half of the mixer region, where screw flights (111) are provided to compress the material).

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Regarding claims 13, 14, 30, 31, 47, 48, 64 and 65, the mixer region is approximately in the middle of the worm assembly and the compressor region is positioned at between 50 and 65% of the length of the worm assembly (fig. 2).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 9-12, 18, 26-29, 35, 43-46, 52, 60-63, and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mackay et al., in view of Böhm et al. (hereinafter “Böhm”) (US 5,156,781).**

Regarding claims 9-12, 26-29, 43-46 and 60-63, Mackay discloses the invention substantially as claimed except for the specific shape of the mixer region. Mackay discloses his mixer region is a straight cylindrical shape (fig. 2). Mackay does not disclose the mixer region comprises a frusto conical member, wherein the frusto conical member is smaller in diameter at a feed inlet end and greater in diameter at a discharge end. However, the patent to Böhm, teaches that it is old and well known in a screw press to provide a worm assembly (fig. 4) having a mixer region (32), wherein the mixer region comprises a frusto conical member in structural as claimed (fig. 4). Böhm teaches this configuration of the mixer region in order to achieve a low temperature mixing (col. 8, lines 1-4). Therefore, it would have been obvious to one having

ordinary skill in the art at the time the invention was made to provide Mackay's mixer region in a frusto conical configuration, as taught by Böhm, in order achieve a low temperature mixing.

Regarding claims 18, 35, 52 and 69, Mackay discloses the invention substantially as claimed except for a temperature control element. The patent to Böhm teaches a temperature control element (36) for controlling a flow of the processed material (col. 8, lines 46-61). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Mackay's screw press with a temperature control element, as taught by Böhm, in order to control a flow of the processed material.

**Claims 15-17, 32-34, 49-51, and 66-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mackay et al., in view of Brambilla (US 5,088,914).** Mackay discloses the invention substantially as claimed except for a plurality of mixer regions. The patent to Brambilla, teaches that it is old and well know in the screw pressing art to provide a screw press (fig. 1) having a plurality of mixer regions (22, 26), wherein a first mixer region (22) is positioned between 25 and 40% of the length of a worm assembly (16), and a second mixer region (26) is positioned between 60 and 80% of the length of the worm assembly (see fig. 1). Brambilla teaches the plurality of mixer regions in order to improve the mixing characteristics (col. 1, lines 29-31). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Mackay's screw press with a plurality of mixer regions, as taught by Brambilla, in order to improve the mixing characteristics.

**Claims 19, 36, 53, and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mackay et al., in view of Lynch (US 4,421,937).** Mackay discloses the invention

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substantially as claimed except for a choke. The patent to Lynch teaches that it is old and well known in the screw pressing art to provide a screw press (fig. 1) with a choke (4) to regulate the amount of processed material being extruded through a discharge end (9). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Mackay's screw press with a choke, as taught by Lynch, in order to regulate the amount of the processed material being extruded through the discharge end.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art listed on the attached PTO 892 are cited to show various mechanical screw press.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy T Nguyen whose telephone number is (571) 272-4520. The examiner can normally be reached on Mon-Thur 8:00am - 6:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allen Ostrager can be reached on (571) 272- 4521. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JTNguyen  
December 28, 2004



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